#### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

# (19) World Intellectual Property Organization International Bureau



### . CORRE BENEROU, N. BORINS (1891) BORIN SOUR BORIN E 11 IN BORINE (1911) BORINS (1816) BORINS (1816) BORINS (1

(43) International Publication Date 23 September 2004 (23.09.2004)

**PCT** 

## (10) International Publication Number WO 2004/080929 A2

(51) International Patent Classification7:

C07C

(21) International Application Number:

PCT/IB2004/000657

(22) International Filing Date: 10 March 2004 (10.03.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/453,419	10 March 2003 (10.03.2003)	US
60/453,418	10 March 2003 (10.03.2003)	US
2003/1937	10 March 2003 (10.03.2003)	ZA
2003/1939	10 March 2003 (10.03.2003)	ZA
		US
60/496,816	21 August 2003 (21.08.2003)	US
2003/6524	21 August 2003 (21.08.2003)	ZA

- (71) Applicant (for all designated States except US): SASOL TECHNOLOGY (PROPRIETARY) LIMITED [ZA/ZA]; 1 Sturdee Avenue, Rosebank 2196 (ZA).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): KOPER, Edward, Ludovicus [NL/ZA]; 11 Douglas Street, Secunda 2302 (ZA). GREAGER, Ivan [ZA/ZA]; 86 Barcelona II Spica Road, Sundowner 2162 (ZA). SCHOLTZ, Jan, Hendrik [ZA/ZA]; 35 Selkirk, Parkview 2193 (ZA). DE WET, Johan, Pieter [ZA/ZA]; 65 Beethoven Street, Vanderbijlpark 1911 (ZA). DESMET, Mieke, Ann [ZA/ZA]; 4 Sandkiaat Avenue, Weltevredenpark 1709 (ZA). JANSEN, Wilhelmina [ZA/ZA]; 14 Deo Volente Mozart Street,

Vanderbijlpark 1911 (ZA). **JACOBSON, Paul** [ZA/ZA]; 14 Sasurei Court, Toon van der Heever Street, Sasolburg 9570 (ZA).

- (74) Agents: DONALD, Heather, June et al.; Spoor & Fisher, PO Box 41312, Craighall 2024 (ZA).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PRODUCTION OF LINEAR ALKYL BENZENE

(57) Abstract: This invention relates to a process for producing linear alkyl benzene and linear paraffins, the process including the steps of obtaining a hydrocarbon condensate containing olefins, paraffins and oxygenates from a low temperature Fischer-Tropsch reaction; a) fractionating a desired carbon number distribution from the hydrocarbon condensate to form a fractionated hydrocarbon condensate stream; b) extracting oxygenates from the fractionated hydrocarbon condensate stream from step a) to form a stream containing olefins and paraffins; c) alkylating the stream containing olefins and paraffins from step b) with benzene in the presence of a suitable alkylation catalyst; and d) recovering linear alkyl benzene and linear paraffin.

